# Avifauna of Ishaqbini Community Conservancy in Ijara District, NE Kenya

# Peter Njoroge, Muchai Muchane, Wanyoike Wamiti, Dominic Kimani Kamau, and Mwangi Githiru

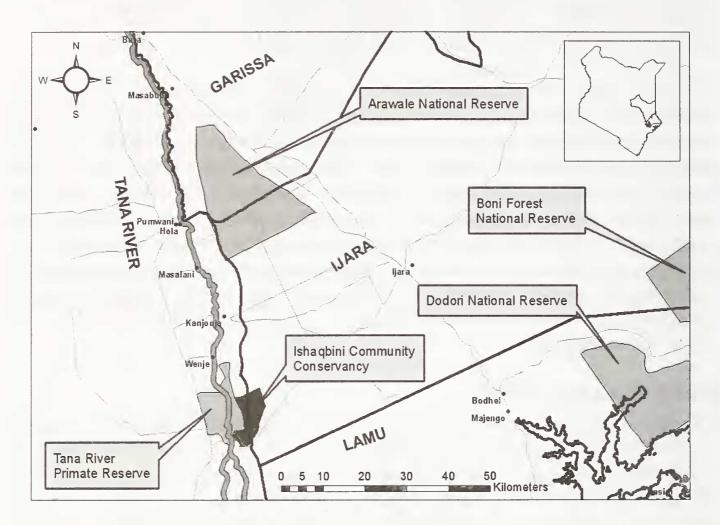
Ishaqbini community conservancy, in the arid northern-eastern Kenya was established in 2006 by local pastoralists as a community initiative to safeguard their wildlife heritage especially the endemic Hirola *Beatragus hunteri*. Prior to this survey there were no known recent avifaunal surveys for the area despite the fact that the conservancy lies adjacent to the relatively well-known lower Tana River forests, an important bird area (Bennun & Njoroge 1999), as well as the East Africa coast forests endemic bird area (Stattersfield *et al.* 1998). In this paper we present the results of an avifaunal survey of the conservancy that includes a description of the bird assemblages in the conservancy, and an annotated account of some species of global and regional conservation concern occurring there.

## Study area and methods

Ishaqbini Community Conservancy (01° 55'S and 040° 10' E; Figure 1) is located in Ijara District, North Eastern Province of Kenya on land designated as Trust Land. The conservancy covers an approximate area of 72 km<sup>2</sup>. It is bordered to the west by Tana River Primate Reserve and by the Garissa-Lamu road to the East. The area is generally low-lying with elevations of between 39 and 65 m a.s.l., and receives a mean annual rainfall of about 500 mm during two rainy seasons, April to June and October to December. However, rainfall patterns in Ijara District are greatly influenced by the coastal monsoons, making the area wetter and cooler than the neighbouring arid districts. The Transboundary Environmental Project (TEP 2004) described the habitat in the conservancy as mainly composed of closed to open woody thickets, open low shrubs and shrub-savannah. Lowland evergreen riverine forests occur in patches on alluvial sediment deposits along the boundary with Tana River Primate Reserve. Apart from being a stronghold for the Hirola, the Conservancy has an impressive diversity of wildlife that include the endangered African Wild Dog Lycaon pictus, African Elephant Loxodonta africana, Cheetah Acinonyx jubatus (occasional visitor), Desert Warthog Phacochoerus aethioopicus and Somali Bush Baby Galago gallarum. The region is sparsely populated by pastoralist Somali communities.

Avifaunal surveys of the conservancy were conducted in two separate periods: the first in February 2007 (to coincide with the dry season) and the second in June 2007 (to coincide with the wet season). We used a combination

of mist-netting (total effort: 1392 net-metre hours), point counts (total: 70 point counts), timed species counts (total: 14 hours) and opportunistic observations to compile a bird species checklist for the conservancy. All mist netting sites and point count transects were geo-referenced for future monitoring purposes. Our nomenclature and systematics follow Zimmerman *et al.* (1996).



**Figure 1**. Map of the study site showing the location of the Ishaqbini Community Conservancy.

#### Results

A total of 184 bird species of 55 families were recorded over a total period of 11 days covering both the dry and wet seasons. Our species list (see Appendix) included 16 Palaearctic migrants and 7 Afrotropical migrants. The list also includes six species listed as rare by the Ornithological Sub-committee of the East Africa Natural History Society (OS-c 1996). Fischer's Turaco *Tauraco fischeri* was the only globally threatened species (IUCN 2008) recorded in the conservancy, but 13 species listed in East Africa's regional red data list (Bennun & Njoroge 1996, Bennun *et al.* 2000) were also recorded. Among the 13 species was one vulnerable (R-VU), eight regionally near-threatened (R-NT) and three regional responsibility species (RR). We also noted range extensions for 20 species (Appendix), most of which had never been recorded beyond the Tana River (Lewis & Pomeroy 1989).

Twenty-three species characteristic of the Somali-Masai biome and seven species characteristic of East African Coastal biome were recorded. The East African Coast biome species recorded were Fischer's Turaco, Carmine Beeeater *Merops nubicus*, Mangrove Kingfisher *Halcyon senegaloides*, Northern Brownbul *Phyllastrephus strepitans*, Brown-breasted Barbet *Lybius melanopterus*, Mombasa Woodpecker *Campethera mombassica* and Black-bellied Starling *Lamprotornis corruscus*. There were also coastal races of some common species such as Tropical Boubou *Lanius aethiopicus sublacteus*, Black-backed Puffback *Dryoscopus cubla affinis* and Lilac-breasted Roller *Coracias caudata lorti*.

# Species of conservation concern

Thirteen species listed in East Africa's Regional Red Data List (Bennun & Njoroge 1996) were recorded. The following are brief notes for some of these species.

## Fischer's Turaco (G-NT)

Listed as near-threatened by IUCN (IUCN 2008) and a regional endemic, this is one of the seven species that define the East Africa coast forests endemic bird area (Stattersfield *et al.* 1998). It has a range that extends from Boni in Kenya south to Tanga in Tanzania, and inland along the Tana River to Garsen and Bura (Zimmerman *et al.* 1996). Three individuals were observed once in the riverine forest bordering Tana River Primate Reserve during the first survey period in February 2007. However, the subsequent wet season visit to the area did not record the species.

## Saddle-billed Stork Ephippiorhnchus senegalensis (R-VU)

This stork is known to breed in the lower parts of the Tana River (Zimmerman *et al.* 1996) but it is rare elsewhere in the country probably due to lack of suitable habitat. A single individual was recorded during the wet season on cultivated floodplains in the southern parts of Ishaqbini Community Conservancy.

## Woolly-necked Stork Ciconia episcopus (R-NT)

Like the Saddle-billed Stork, the threatened regional status maybe due to shrinking of its preferred habitats. It is known to be mostly found in the coastal lowlands in East Africa where it is usually solitary or in pairs (Zimmerman et al. 1996, Britton 1980). We recorded several hundred soaring above the Tana River at Baomo during the dry season survey in February 2007. There are reports that they may exhibit some local movements where they flock together in several hundreds (del Hoyo et al. 1992). Only a single individual was recorded during the wet season survey in June 2007 flying over the cultivated floodplain in the south of Ishaqbini Community Conservancy.

# Mombasa Woodpecker Campethera mombassica (RR)

This species characteristic of the East Africa coast biome was recorded once in *Acacia* woodlands at Kitere in the southern part of the conservancy.

Zimmerman *et al.* (1996) describe it as locally fairly common in forest and coastal woodland but it was not common in Ishaqbini.

## Violet-breasted Sunbird Nectarinia chalcomelas (R-NT)

Considered rare (OS-c 1996), this species inhabits the moist coastal scrub and grassy thickets in area from Somali border to Kiunga and inland to Ijara (Zimmerman *et al.* 1996). The species was regularly seen during the survey in *Acacia* thickets and one individual was caught in riverine woodland during the wet season survey in June 2007.

Other regionally threatened species recorded in Ishaqbini Community Conservancy include Green-backed Heron *Butorides striatus* (R-NT), Purple Heron *Ardea purpurea* (R-NT), Goliath Heron *Ardea goliath* (R-NT), Grey Heron *Ardea cinerea* (R-NT), Great Cormorant *Phalacrocorax carbo* RR), Long-tailed Fiscal *Lanius cabanisi* (RR) and Pink-breasted Lark *Mirafra poecilosterna* (RR).

#### Discussion

With 184 bird species recorded in two relatively short surveys, Ishaqbini Community Conservancy has fairly high species richness. This may be attributed to the diversity of habitats within the conservancy as well as its location at the intersection of two bio-diverse biomes — Somali-Masai and East Africa Coastal Forests biomes. The conservancy compares favourably with other frequently visited bird-watching hotspots in the region, such as Arabuko-Sokoke Forest with about 230 species (Fanshawe 1995). Estimates obtained based on the Bird Atlas of Kenya (Lewis & Pomeroy 1989) and databases held at the Ornithology section of the National Museums of Kenya, the number of species expected for this area (Quarter Degree Square 79c-Lewis & Pomeroy 1989) is about 300 species.

Given the numbers of Somali-Masai and East Africa Coastal Forests biome species present, the Ishaqbini Community Conservancy would qualify as an Important Bird Area (Fishpool 1996). However, numbers of each biome species recorded are low as compared to other IBAs in the region. For example, while the neighbouring Tana River forests IBA has 19 of the 30 Kenyan species of the East African Coastal Forests biome (Bennun & Njoroge 1999), only seven were recorded at Ishaqbini. The conservancy also compares poorly with other Somali-Masai biome IBAs e.g. Tsavo East National Park has 60 of the 92 Kenyan Somali-Masai biome species as compared to only 23 recorded at Ishaqbini. Still, it is worth noting that, firstly, our checklist is unlikely to be complete and more species may yet be recorded with more intensive surveys, and secondly, the other protected areas, particularly Tsavo, are much larger. Besides, Ishaqbini is unique in having reasonable numbers of species representative of both biomes. The conservancy is clearly delimitable from the surrounding areas, large enough to stand alone and hence amenable to conservation independently. Finally, being a conservation initiative of the

local community themselves, the conservancy could serve as the ideal example for neighbouring communities to emulate.

### Acknowledgements

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#### References

- Bennun, L. & Njoroge, P. (eds) 1996. Birds to watch in East Africa: A preliminary Red Data list. Research Reports of the centre for Biodiversity, National Museums of Kenya: Ornithology 23.
- Bennun, L. & Njoroge, P. 1999. *Important Bird Areas in Kenya*. Nairobi: East Africa Natural History Society.
- Bennun, L., Njoroge, P. & Pomeroy, D. 2000. Birds to watch: a Red Data List for East Africa. *Ostrich* 71: 310-314.
- del Hoyo, J., Elliot, A. & Sargatal, J. (eds) 1992. *Handbook of the Birds of the world.* Vol.1. Barcelona: Lynx Edicions.
- Fanshawe, J.H. 1995. The effects of selective logging on the bird community of Arabuko-Sokoke Forest. Unpublished PhD thesis. University of Oxford.
- Fishpool, L. 1996. *Important Bird Areas in Africa: IBA criteria, categories and thresholds*. Cambridge: BirdLife International.
- IUCN 2008. 2008 IUCN Red List of Threatened Species. <www.iucnredlist.org>. Downloaded on 27 October 2008.
- Lewis, A. & Pomeroy, D. 1989. A bird atlas of Kenya. Rotterdam: AA Balkema.
- OS-c 1996. Check-list of the birds of Kenya. Third Edition. Nairobi: East Africa Natural History Society Ornithological Sub-committee.
- Stattersfield, A.J., Crosby, M.J., Long, A.J., & Wege, D.C. 1998. Endemic bird areas of the world: priorities for biodiversity and conservation. Cambridge: BirdLife International (BirdLife Conservation Series 7).
- TEP. 2004. Procedures and protocols for ecological data collection. Nairobi: Terra Nuova and Istituto Oikos, Transboundary Environmental Project.
- Zimmerman, D.A., Turner, D.A. & Pearson, D.J. 1996. Birds of Kenya and northern Tanzania. South Africa: Russell Friedman.

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### **Appendix**

List of all species recorded at Ishaqbini Community Conservancy during the survey, their status (am=afrotropical migrant, pm=palaearctic migrant, R-VU= regionally vulnerable, R-NT= regionally near-threatened, R-RR=regional responsibility, new QSD= new record for quarter degree square 79c, X = considered rare by OS-c 1996) and sampling method that recorded the species (1=mist-netting, 2=point counts, 3= timed species counts, 4=opportunistic observations).

Common Name	Scientific name	Status	1	2	3	4
Somali Ostrich	Struthio camelus molybdophanes	R-NT				
Great White Pelican	Pelecanus onocrotalus	R-RR, new QSD				
Great Cormorant	Phalacrocorax carbo	R-RR				0
Long-tailed Cormorant	Phalacrocorax africanus					
Black-crowned Night Heron	Nycticorax nycticorax	am, pm				
Cattle Egret	Bubulcus ibis	am				
Little Egret	Egretta garzetta					
Green-backed Heron	Butorides striatus	R-NT				
Grey Heron	Ardea cinerea	am, pm, R-NT				
Purple Heron	Ardea purpurea	R-NT			0	
Goliath Heron	Ardea goliath	R-NT			[] '	
Black-headed Heron	Ardea melanocephala					
Hamerkop	Scopus umbretta				0	
Woolly-necked Stork	Ciconia episcopus	R-NT				
Saddle-billed Stork	Ephippiorhynchus senegalensis	R-VU				
Marabou Stork	Leptoptilos crumeniferus					
African Open-billed Stork	Anastomus lamelligerus					
Yellow-billed Stork	Mycteria ibis				0	
Sacred Ibis	Threskiornis aethiopicus				[]	
Hadada Ibis	Bostrychia hagedash					
Glossy Ibis	Plegadis falcinellus	am, pm				
African Spoonbill	Platalea alba					
Fulvous Whistling Duck	Dendrocygna bicolor					
Egyptian Goose	Alopochen aegyptiacus					
Knob-billed Duck	Sarkidiornis melanotos	am			0	
Secretary Bird	Sagittarius serpentarius					
Black-shouldered Kite	Elanus caeruleus				0	
Black-chested Snake Eagle	Circaetus pectoralis					
Bateleur	Terathopius ecaudatus					
Eurasian Marsh Harrier	Circus aeruginosus	pm				
Gabar Goshawk	Micronisus gabar					
Eastern Pale Chanting Goshawk	Melierax poliopterus				0	
Little Sparrowhawk	Accipiter minullus	Χ				
African Fish Eagle	Haliaeetus vocifer					
Pygmy Falcon	Polihierax semitorquatus					
Harlequin Quail	Corturnix delegorguei	new QSD				

Common Name	Scientific name	Status	1	2	3	4
Crested Francolin	Francolinus sephaena			0	0	
Yellow-necked Spurfowl	Francolinus leucoscepus				0	
Vulturine Guineafowl	Acryllium vulturinum					
Black Crake	Amaurornis flavirostra	new QSD				
White-bellied Bustard	Eupodotis senegalensis					
Black-bellied Bustard	Eupodotis melanogaster	new QSD				
Buff-crested Bustard	Eupodotis ruficrista					0
African Jacana	Actophilornis africanus					0
Eurasian Thick-knee	Burhinus oedicnemus	pm, X, new QSD				
Water Thick-knee	Burhinus vermiculatus					
Spotted Thick-knee	Burhinus capensis					
Kittlitz's Plover	Charadrius pecuarius					
Spur-winged Plover	Vanellus spinosus					
Black-headed Plover	Vanellus tectus					
Senegal Plover	Vanellus lugubris					
Greenshank	Tringa nebularia	pm				
Wood Sandpiper	Tringa glareola	pm				
Common Sandpiper	Actitis hypoleucos	pm				
Chestnut-bellied Sandgrouse	Pterocles exustus	new QSD				
Black-faced Sandgrouse	Pterocles decoratus					
African Green Pigeon	Treron calva					
Tambourine Dove	Turtur tympanistria					
Emerald-spotted Wood Dove	Turtur chalcospilos					
Namaqua Dove	Oena capensis					
Red-eyed Dove	Streptopelia semitorquata					
African Mourning Dove	Streptopelia decipiens					
Ring-necked Dove	Streptopelia capicola					
Laughing Dove	Streptopelia senegalensis					
Fischer's Turaco	Tauraco fischeri					
Eurasian Cuckoo	Cuculus canorus	pm, X, new QSD				
Klaas's Cuckoo	Chrysococcyx klaas					
Diederik Cuckoo	Chrysococcyx caprius					
White-browed Coucal	Centropus superciliosus			0		
African Scops Owl	Otus senegalensis					
Donaldson-Smith's Nightjar	Caprimulgus pectoralis					
Gabon Nightjar	Caprimulqus fossii	X, new QSD				
Slender-tailed Nightjar	Caprimulqus clarus					
African Palm Swift	Cypsiurus parvus					
Speckled Mousebird	Colius striatus					
White-headed Mousebird	Colius leucocephalus					
Blue-naped Mousebird	Urocolius macrourus					
Grey-headed Kingfisher	Halcyon leucocephala			0		
Brown-hooded Kingfisher	Halcyon albiventris		0			
Mangrove Kingfisher	Halcyon senegaloides					

Common Name	Scientific name	Status	1	2	3	4
Striped Kingfisher	Halcyon chelicuti					
Malachite Kingfisher	Alcedo cristata					0
African Pygmy Kingfisher	Ispidina picta					
Pied Kingfisher	Ceryle rudis					0
Carmine Bee-eater	Merops nubicus	am				
White-throated Bee-eater	Merops albicollis	am				
Eurasian Roller	Coracias garrulus					0
Lilac-breasted Roller	Coracias caudata					
Green Woodhoopoe	Phoeniculus purpureus					
Common Scimitarbill	Rhinopomastus cyanomelas					
Abyssinian Scimitarbill	Rhinopomastus minor					
Red-billed Hornbill	Tockus erythrorhynchus					
Von Der Decken's Hornbill	Tockus deckeni					
Crowned Hornbill	Tockus alboterminatus					
African Grey Hornbill	Tockus nasutus			0	] .	
Trumpeter Hornbill	Bycanistes bucinator				u	
Red-fronted Tinkerbird	Pogoniulus pusillus					
Brown-breasted Barbet	Lybius melanopterus		u	Ш	и	
d'Arnaud's Barbet	Trachylaemus damaudii					U
Scaly-throated Honeyguide	Indicator variegatus					
	Indicator indicator				Ш	
Greater Honeyguide			П	U .		
Nubian Woodpecker	Campethera nubica	D DD		п		
Mombasa Woodpecker	Campethera mombassica	R-RR	n	0	П	
Green-backed Woodpecker	Campethera cailliautii					
Red-winged Lark	Mirafra hypermetra	D DD				
Pink-breasted Lark	Mirafra poecilosterna	R-RR				
Wire-tailed Swallow	Hirundo smithii					0
Barn Swallow	Hirundo rustica	pm				
Golden Pipit	Tmetothylacus tenellus					
African Pied Wagtail	Motacilla aguimp					
Yellow Wagtail	Motacilla flava	pm				
Grassland Pipit	Anthus cinnamomeus					
Zanzibar Sombre Greenbul	Andropadus importunus					
Northern Brownbul	Phyllastrephus strepitans					
Common Bulbul	Pycnonotus barbatus					
Rufous Chatterer	Turdoides rubiginosus					
White-browed Robin Chat	Cossypha heuglini					
White-browed Scrub Robin	Cercotrichas leucophrys					
Eastern Bearded Scrub Robin	Cercotrichas quadrivirgata					
Rufous Bush Chat	Cercotrichas galactotes	pm		٠.		
Northern Wheatear	Oenanthe oenanthe	new QSD				
Spotted Flycatcher	Muscicapa striata	pm				
Southern Black Flycatcher	Melaenornis pammelaina					
African Grey Flycatcher	Bradornis microrhynchus					

Common Name	Scientific name	Status	1	2	3	4
Pale Flycatcher	Bradornis pallidus			0		
Barred Warbler	Sylvia nisoria	pm, X, new QSD	0			
Common Whitethroat	Sylvia communis	Pm, new QSD				
Villow Warbler	Phylloscopus trochilus	pm				
Winding Cisticola	Cisticola galactotes					
Rattling Cisticola	Cisticola chiniana					
Ashy Cisticola	Cisticola cinereolus	new QSD				
Pale Prinia	Prinia somalica					
Grey Wren Warbler	Calamonastes simplex		0	0		
Grey-backed Camaroptera	Camaroptera brachyura					
Northern Crombec	Sylvietta brachyura					
Red-faced Crombec	Sylvietta whytii	new QSD				
Somali Long-billed Crombec	Sylvietta isabellina	new QSD				
/ellow-vented Eremomela	Eremomela flavicrissalis	new QSD			0	
Pygmy Batis	Batis perkeo	new QSD				0
Northern White-crowned Shrike	Eurocephalus rueppelli		0			
Red-tailed Shrike	Lanius isabellinus	pm			0	
ong-tailed Fiscal	Lanius cabanisi	R-RR				
aita Fiscal	Lanius dorsalis				0	
Black-crowned Tchagra	Tchagra senegala			0	0	
Sulphur-breasted Bush-Shrike	Malaconotus sulfureopectus			0		
Grey-headed Bush-Shrike	Malaconotus blanchoti					
ropical Boubou	Laniarius aethiopicus		0	0		
Slate-coloured Boubou	Laniarius funebris	new QSD		0		
Black-backed Puffback	Dryoscopus cubla					
Black Cuckoo Shrike	Campephaga flava					
Common Drongo	Dicrurus adsimilis					
Eurasian Golden Oriole	Oriolus oriolus	pm				
Black-headed Oriole	Oriolus larvatus					
Black-bellied Starling	Lamprotornis corruscus			0		
Greater Blue-eared Starling	Lamprotornis chalybaeus	new QSD		0		
Rüppell's Long-tailed Starling	Lamprotornis purpuropterus		0	0		
Superb Starling	Lamprotornis superbus			0		
Fischer's Starling	Spreo fischeri		0	0		
Vattled Starling	Creatophora cinerea			0		
Eastern Violet-backed Sunbird	Anthreptes orientalis		0	0		
Collared Sunbird	Anthreptes collaris					
Mouse-coloured Sunbird	Nectarinia veroxii					
Olive Sunbird	Nectarinia olivacea					
Amethyst Sunbird	Nectarinia amethystina					
Hunter's Sunbird	Nectarinia hunteri					
Variable Sunbird	Nectarinia venusta					
Purple-banded Sunbird	Nectarinia bifasciata		0			
arpio-bariaga Garibira	, totalina bilatolata		2			

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Common Name	Scientific name	Status	1 2	3 4
House Sparrow	Passer domesticus	new QSD		
Yellow-spotted Petronia	Petronia pyrgita			
White-headed Buffalo-Weaver	Dinemellia dinemelli			
Red-billed Buffalo-Weaver	Bubalornis niger		0	
Black-necked Weaver	Ploceus nigricollis			
Spectacled Weaver	Ploceus ocularis			
African Golden Weaver	Ploceus subaureus			
Vitelline Masked Weaver	Ploceus velatus			
Lesser Masked Weaver	Plocepasser itermedius			
Black-headed Weaver	Ploceus cucullatus			
Chestnut Weaver	Ploceus rubiginosus			
Red-billed Quelea	Quelea quelea	am		
Green-winged Pytilia	Pytilia melba			
Common Waxbill	Estrilda astrild			
Red-cheeked Cordon-bleu	Uraeginthus bengalus			
Bronze Mannikin	Lonchura cucullata			